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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,181	11/26/2003	Tony F. Rodriguez	P0912	5733
23735 7590 12/16/2009 DIGIMARC CORPORATION 9405 SW GEMINI DRIVE BEAVERTON, OR 97008				
EXAMINER KAU, STEVEN Y				
ART UNIT		PAPER NUMBER		
2625				
MAIL DATE		DELIVERY MODE		
12/16/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/723,181

**Applicant(s)**

RODRIGUEZ ET AL.

**Examiner**

STEVEN KAU

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Acknowledgement***

1. Applicant's amendment was received on 9/28/2009, and has been entered and made of record.

***Status of the Claims***

2. Claims 1-21 are now pending for further examination in this Action.

***Response to Remark/Arguments***

3. Applicant's arguments with respect to claims 1-21 have been fully considered but are moot in view of the new ground(s) of rejection (or and the reply to the Remarks/Arguments is in the following:).

- Applicant acknowledges that claims 1 and 17 were rejected on the ground of nonstatutory obviousness-type double patenting, page 7, Remarks, 9/28/2009; because no action has been taken by the applicant, the rejection still stands.
- Applicant's arguments, regarding claims 1-21 rejections Under 35 U.S.C. § 101, page 7, Remarks, 9/28/2009, along with the amended claims have been fully considered and are persuasive. The rejection of claims 1-21 under 35 U.S.C. § 101 are withdrawn from the record.

- Applicant's arguments with respect to Claims 1-21 have been fully considered but are moot in view of the new ground(s) of rejection due to the amendments.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1, 2, 14, and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujii et al (US 6,091,844).

Regarding claim 1.

Fujii discloses a method for analyzing an image of a printed object to determine whether the printed image is a copy or an original (referring to Fig. 1, a method for detecting an original document, i.e. “an image processing device and method for preventing the counterfeiting of bank notes, negotiable securities, and the like”, col 1, lines 9-14), the method comprising: using a programmed computing device (referring to Figs. 2-5 and 10, Binary Processing Unit, Memories, Control CPU, and Pattern Detecting/Judging Device Circuits, etc.) to determine whether a machine readable auxiliary signal (i.e. a pattern) is embedded (i.e. synthesized, col 5, lines 40-50) in the image (referring to Figs. 12, 14, 27 and 33, for examples,

**processes for detecting/extracting a synthesized pattern for examination/judgment, col 5, lines 6- 65, and so on), wherein the auxiliary signal is embedded at embedding locations using a set of two or more print structures (i.e. shapes, characters, positions as shown in Figs. 12-18, and pixel data, i.e. density and RGB or Red Green & Blue data as shown in Figs 20 & 23, etc.) that change in response to a copy operation (i.e. any changes or mismatches of reference position and color components, i.e. RGB data, col 2, line 63 to col 3, line 9 & col 5, lines 15-44), the change causing a divergence or convergence of a characteristic of the print structures such that the machine readable signal becomes more or less detectable (as disclosed in first embodiment of Figs. 6-18, second embodiment, Figs. 21-25, and third embodiment of Figs. 27-34, when the print structures, i.e. shapes, characters, densities, coordinates of reference positions and data of RGB color components of the extracted pattern(s) are determined or judged for matching with the reference pattern or not, col 17, line 51 to col 20, line 33); and based on evaluating the machine readable auxiliary signal (i.e. data of signal of the extracted pattern), using a programmed computing device (Binary Processing Unit, Memories, Control CPU, and Pattern Detecting/Judging Device Circuits, etc. of Figs. 2-5 and 10) to determine whether the printed object is a copy or an original (referring to the processes disclosed in Figs. 24, 25, 27, 33, & 34, when all reference data, i.e. print structures such as shapes, coordinates of reference positions and RGB color component data are determined being matched, or no changes, then the document being examined is an original and copying is prohibited).**

Regarding claim 2, of claim 1.

Fujii discloses wherein the set of print structures include a first color and a second color that change differently in response to a copy operation (referring to **Figs. 23, 24 & 25, RGB color components of the detected pattern are judged whether these data are matched with the referencing pattern, col 17, line 51 to col 18, line 26).**

Regarding claim 8, in accordance with claim 1.

Fujii discloses wherein the auxiliary signal (**i.e. moiré patterns**) is embedded by varying continuity of line structures (referring to **Figs. 6, 8, 11, 13 & 16, etc., the auxiliary signal, or pattern can be different shapes, i.e. angular or circular, or characters; also see Figs. 12, 14 & 15).**

Regarding claim 14.

Claim 14 is directed to a computer-readable storage medium claim which substantially corresponds to operation of the steps in claim 1, with processing steps directly corresponding to the step functions in claim 1. Thus, claim 14 is rejected as set forth above for claim 1.

Regarding claim 17.

Fujii discloses a method for analyzing an image of a printed object to determine whether the printed image is a copy or an original (referring to **Fig. 1, a method for detecting an original document, i.e. “an image processing device and method for preventing the counterfeiting of bank notes, negotiable securities, and the like”, col 1, lines 9-14**), the method comprising:

using a programmed computing device (**referring to Figs. 2-5 and 10, Binary Processing Unit, Memories, Control CPU, and Pattern Detecting/Judging Device Circuits, etc.**) to determine whether a machine readable auxiliary signal (**i.e. a pattern**) is embedded (**i.e. synthesized, col 5, lines 40-50**) in the image (**referring to Figs. 12, 14, 27 and 33, for examples, processes for detecting/extracting a synthesized pattern for examination/judgment, col 5, lines 6- 65, and so on**), wherein the auxiliary signal is embedded at embedding locations using a print structure (**i.e. shapes, characters, positions as shown in Figs. 12-18, and pixel data, i.e. density and RGB or Red Green & Blue data as shown in Figs 20 & 23, etc.**) that changes in response to a copy operation (**i.e. any changes or mismatch of reference position and color components, i.e. RGB data**), the change causing a divergence or convergence of a characteristic of the print structure such that the machine readable signal becomes more or less detectable (**as disclosed in first embodiment of Figs. 6-18, second embodiment, Figs. 21-25, and third embodiment of Figs. 27-34, when the print structures, i.e. shapes, characters, densities, coordinates of reference positions and data of RGB color components of the extracted pattern(s) are determined or judged for matching with the reference pattern or not, col 17, line 51 to col 20, line 33**), the print structure comprising a color that changes in response to a copy operation (**referring to Figs. 22, 23, 24, 25, data of RGB color components are used for determining whether the extracted pattern matches with the reference pattern, col 16, lines 47-67 and col 17, line 51 to col 18, line 26**); and based on evaluating the machine readable auxiliary signal (**i.e. data of signal of the**

**extracted pattern**), using a programmed computing device (**Binary Processing Unit, Memories, Control CPU, and Pattern Detecting/Judging Device Circuits, etc. of Figs. 2-5 and 10,**) to determine whether the printed object is a copy or an original (referring to the processes disclosed in **Figs. 24, 25, 27, 33, & 34,** when all reference data, i.e. print structures such as shapes, coordinates of reference positions and RGB color component data are determined being matched, or no changes, then the document being examined is an original and copying is prohibited).

Regarding claim 18, of claim 17.

Fujii discloses wherein the auxiliary signal is embedded by varying continuity of line structures (referring to **Figs. 6, 8, 11, 13 & 16, etc., the auxiliary signal, or pattern can be different shapes, i.e. angular or circular, or characters; also see Figs. 12, 14 & 15).**

Regarding claim 19.

Claim 19 is directed to a computer-readable storage medium claim which substantially corresponds to operation of the steps in claim 17, with processing steps directly corresponding to the step functions in claim 17. Thus, claim 19 is rejected as set forth above for claim 17.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:



A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 15, 16, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Heckman et al (US 5,291,243).

Regarding claim 15.

Heckman discloses a method for creating an image to be printed on a printed object, the image being used to determine whether the printed image is a copy or an original (i.e. **an improved system to create copy-proof or tamper-resistant document, col 1, line 6 to col 3, line 33**), the method comprising: using a programmed computing device (**referring to Figs. 1-3, an image processing system, col 6, line 61 to col 7, line 65**) to embed a machine readable auxiliary signal in the image (i.e. **embedding text, i.e. a warning word "VOID"**), wherein the auxiliary signal is embedded at embedding locations using a set of two or more print structures (i.e. **"The two partial images for example could be assigned a halftone area coverage with a varying gradient density of 30-25% for the highlight color image and 20-15% for the black image", col 7, lines 66 to col 8, line 38, and different intensity, or density gradients of halftone patterns as shown in Figs. 5-10, col 9, lines 14-39**) that change in response to a copy operation (i.e. **"attempted copier reproductions of these documents are readily identified by offset color patterns, or even color bands if the imaging or imaged surface velocity changes, or the copy paper shrinks, between passes", col 12, lines 7-12**), the change causing a divergence or convergence of a characteristic of the print structures such that the

machine readable signal becomes more or less detectable (**referring to Figs. 5-10 as examples that any changes of color gradient intensity are sensitive to electrophotographic reproduction machine, and therefore, any alters of the above features can be identified, col 8, lines 15-21**); and using a programmed computing device (**an image processing system of Figs. 1-3,, col 6, line 61 to col 7, line 65**) to create a metric (**i.e. metric, or print structure disclosed in Figs. 4-10**) to detect the convergence or divergence from an image scanned of a suspect printed object to determine whether the suspect printed object is a copy or an original (**referring to Figs. 5-10 as examples that any changes of color gradient intensity are sensitive to electrophotographic reproduction machine, and therefore, any alters of the above features can be identified, col 8, lines 15-21, and col 12, lines 7-12**).

Regarding claim 16.

Claim 16 is directed to a computer-readable storage medium claim which substantially corresponds to operation of the steps in claim 15, with processing steps directly corresponding to the step functions in claim 1. Thus, claim 16 is rejected as set forth above for claim 15.

Regarding claim 20.

Heckman discloses a method for creating an image to be printed on a printed object, the image being used to determine whether the printed image is a copy or an original (**i.e. an improved system to create copy-proof or tamper-resistant document, col 1, line 6 to col 3, line 33**), the method comprising:  
using a programmed computing device (**referring to Figs. 1-3, an image processing**

**system, col 6, line 61 to col 7, line 65)** to embed a machine readable auxiliary signal in the image (i.e. **embedding text, i.e. a warning word "VOID"**), wherein the auxiliary signal is embedded at embedding locations using a print structure (i.e. **"The two partial images for example could be assigned a halftone area coverage with a varying gradient density of 30-25% for the highlight color image and 20-15% for the black image"**, col 7, lines 66 to col 8, line 38, and different intensity, or density gradients of halftone patterns as shown in Figs. 5-10, col 9, lines 14-39) that changes in response to a copy operation (i.e. **"attempted copier reproductions of these documents are readily identified by offset color patterns, or even color bands if the imaging or imaged surface velocity changes, or the copy paper shrinks, between passes"**, col 12, lines 7-12), the change causing a divergence or convergence of a characteristic of the print structures such that the machine readable signal becomes more or less detectable (referring to Figs. 5-10 as examples that any changes of color gradient intensity are sensitive to electrophotographic reproduction machine, and therefore, any alters of the above features can be identified, col 8, lines 15-21); and using a programmed computing device (an image processing system of Figs. 1-3, col 6, line 61 to col 7, line 65) to create a metric (i.e. metric, or print structure disclosed in Figs. 4-10) to detect the convergence or divergence from an image scanned of a suspect printed object to determine whether the suspect printed object is a copy or an original (referring to Figs. 5-10 as examples that any changes of color gradient intensity are sensitive to electrophotographic

**reproduction machine, and therefore, any alters of the above features can be identified, col 8, lines 15-21, and col 12, lines 7-12).**

Regarding claim 21.

Claim 21 is directed to a computer-readable storage medium claim which substantially corresponds to operation of the steps in claim 20, with processing steps directly corresponding to the step functions in claim 20. Thus, claim 21 is rejected as set forth above for claim 20.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al (US 6,091,844) as applied to claim 2 above, and in view of Tavernier et al (US 5,824,447).

Regarding claim 3, in accordance with claim 2.

Fujii does not disclose wherein at least one of the colors corresponds to an ink color that is out of gamut of a printer or scanner.

Tavernier teaches wherein at least one of the colors corresponds to an ink color that is out of gamut of a printer or scanner (**i.e. "It is possible to introduce pigments**

**having a color laying outside of the color gamut printable by normal photocopiers in such a way that photocopying of the document is impossible”, col 7, line 62 to col 8, line 32).**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii to include wherein at least one of the colors corresponds to an ink color that is out of gamut of a printer or scanner as taught by Tavernier. The motivation for doing so would have been to enhance document security protection and to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al (US 6,091,844) as applied to claim 2 above, and in view of Kimura et al (US 6,434,322).

Regarding claim 4, in accordance with claim 2.

Fujii does not disclose wherein a difference in luminance of the two colors changes in response to a copy operation.

Kimura teaches wherein a difference in luminance of the two colors changes in response to a copy operation (**i.e. luminance value is changed in the reproduction method, col 2, lines 51-67**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii to include wherein a difference in luminance of the two colors changes in response to a copy operation as taught by Kimura. The motivation for doing so would have been to enhance document security protection and

to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al (US 6,091,844) as applied to claim 1 above, and in view of Ostromoukhov et al (US 6,198,545).

Regarding claim 5, in accordance with claim 1.

Fujii does not disclose wherein the set of print structures include a first print structure having a first dot gain property and a second print structure having a second dot gain property; wherein the first print structure is more susceptible to dot gain than the second print structure in response to a copy operation.

Ostromoukhov teaches wherein the set of print structures include a first print structure having a first dot gain property and a second print structure having a second dot gain property (i.e. **variations of the halftoning period are useful to prevent non authorized copies of images produced in this manner; this is due to the fact that small screen dots and large screen dots are subjected to a different dot gain during reproduction, col 9, lines 5-26**); wherein the first print structure is more susceptible to dot gain than the second print structure in response to a copy operation (i.e. **referring Figs. 20 & 21, two different print structure gives different result and one is more susceptible than the other; col 9, lines 5-26**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii to include wherein a difference in luminance

of the two colors changes in response to a copy operation as taught by Ostromoukhov. The motivation for doing so would have been to enhance document security protection and to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al (US 6,091,844) as applied to claim 1 above, and in view of Coonan et al (US 5,687,297).

Regarding claim 6, in accordance with claim 1.

Fujii does not disclose wherein a difference in luminance of the print structures changes in response to a copy operation due to a difference in susceptibility to dot gain of the print structures.

Coonan teaches wherein a difference in luminance of the print structures changes in response to a copy operation due to a difference in susceptibility to dot gain of the print structures (i.e. **applying augment compact dot grow mode to detect an edge or brightness transition between a target and any of its adjacent relative of the neighboring pixels; that is, a difference in luminance of the print structures changes in response to a copy operation due to a difference in susceptibility to dot gain of the print structures; col 10, lines 28-56**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii to include wherein a difference in luminance of the print structures changes in response to a copy operation due to a difference in

susceptibility to dot gain of the print structures as taught by Coonan. The motivation for doing so would have been to enhance document security protection and to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al (US 6,091,844) as applied to claim 1 above, and in view of Burnham et al (US 4,884,828).

Regarding claim 7, in accordance with claim 1.

Fujii does not disclose wherein the set of print structures include a first print structure having a first aliasing property and a second print structure having a second aliasing property; wherein the first print structure aliases differently than the second print structure.

However, Burnham teaches wherein the set of print structures include a first print structure having a first aliasing property and a second print structure having a second aliasing property (**i.e. referring to the drawing, it disclose different moiré pattern lines**); wherein the first print structure aliases differently than the second print structure (**i.e. referring to the drawing, moire patterns have hitherto provided a satisfactory degree of security against counterfeiting, col 1, lines 9-26 and line 62 to col 2, line 26**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii to include wherein the set of print structures



include a first print structure having a first aliasing property and a second print structure having a second aliasing property; wherein the first print structure aliases differently than the second print structure as taught by Burnham. The motivation for doing so would have been to enhance document security protection and to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

14. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al (US 6,091,844) in view of Burnham et al (US 4,884,828) as applied to claim 8 above, and further in view of Castagnoli (US 5,074,596).

Regarding claim 9, in accordance with claim 8.

Fujii does not disclose wherein one print structure comprises a line segment in a first color, and another print structure comprises a line segment in another color.

Castagnoli teaches wherein one print structure comprises a line segment in a first color, and another print structure comprises a line segment in another color (i.e. **referring to Figs. 1-9, line segments with different color designs; col 3, lines 12-18 and col 4, lines 18-61**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii and Burnham to include wherein one print structure comprises a line segment in a first color, and another print structure comprises a line segment in another color as taught by Castagnoli. The motivation for doing so would have been to enhance document security protection and to detect whether a

printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

Regarding claim 10, in accordance with claim 9.

Fujii does not disclose wherein the line segments of the different colors are arranged by varying between the first and second colors along a printed line.

Castagnoli teaches wherein the line segments of the different colors are arranged by varying between the first and second colors along a printed line (i.e. **referring to Figs. 5 and 5a, line segments have alternately different colors, Abstract, and col 4, lines 40-61**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii and Burnham to include wherein the line segments of the different colors are arranged by varying between the first and second colors along a printed line as taught by Castagnoli. The motivation for doing so would have been to enhance document security protection and to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

15. Claims 11, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al (US 6,091,844) as applied to claim 1 above, and in view of Umeda (US 7,027,189).

Regarding claim 11, in accordance with claim 1.

Fujii does not disclose wherein the evaluating includes evaluating a frequency domain metric to detect changes in the print structures.

Umeda teaches wherein the evaluating includes evaluating a frequency domain metric to detect changes in the print structures (i.e. **increase of power in low-frequency domain degrades the image quality and therefore a counterfeit is detected, col 4, line 28 to col 5, line 41 and Fig. 10**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii to include wherein the evaluating includes evaluating a frequency domain metric to detect changes in the print structures as taught by Umeda. The motivation for doing so would have been to enhance document security protection and to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

Regarding claim 12, in accordance with claim 11.

Fujii does not disclose wherein the frequency domain metric is a radial frequency domain metric.

Umeda teaches wherein the frequency domain metric is a radial frequency domain metric (**referring to Figs. 8A-C, and 9A-C, which disclose radial frequency domain, col 4, lines 39-64**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii to include wherein the frequency domain metric is a radial frequency domain metric as taught by Umeda. The motivation for doing so would have been to enhance frequency domain detection by evaluating the

power distribution and to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

Regarding claim 13, in accordance with claim 1.

Fujii does not disclose wherein the frequency domain metric is used to evaluate changes in color of a print structure.

Umeda teaches wherein the frequency domain metric is used to evaluate changes in color of a print structure (i.e. referring to Fig. 10, evaluating power spectrum of color component for dot-pattern, col 5, lines 13-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Fujii to include wherein the frequency domain metric is used to evaluate changes in color of a print structure as taught by Umeda. The motivation for doing so would have been to enhance frequency domain detection by evaluating the power spectrum of a color component and to detect whether a printed copy is a copy or an original; and further it is easily implemented by one or other in the art with a predictable result.

***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on Monday to Friday, from 8:30 am -5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Steven Kau/  
Examiner, Art Unit 2625  
December 11, 2009

/David K Moore/  
Supervisory Patent Examiner, Art Unit 2625